E. O. SESSIONS.
CABLE SUPPORTING INSULATOR.
APPLICATION FILED FEB. 9, 1912.

1,125,742.

2 SHEETS-SHEET 1.

Fig. 1

Fig. 2

Fig. 3

Witnesses:
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To all whom it may concern:

Be it known that I, Edson O. Sessions, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Cable-Supporting Insulators, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improved form of cable supporting insulator, particularly adapted to support the electric conductor from a pipe or rod. By my invention, the construction of the supporting bracket and also of the insulator proper is such that the construction is much simplified and at the same time the efficiency of the insulator is increased.

The several drawings illustrating my invention are as follows:

Figure 1 is an end view of one of the insulators showing the insulator proper partially in section. Fig. 2 is a side view of the parts shown in Fig. 1 and in this view the insulator is shown mounted in place upon a supporting pipe. Fig. 3 is an assembly view indicating a number of insulator supports in use for supporting cables back of a switchboard. Figs. 4 and 5 show in end and top views a modified construction of insulator support.

Similar numerals refer to similar parts throughout the several views.

As shown in Figs. 1 and 2, the insulator support consists of two sections 1 and 2 secured together by bolts 3 and 4. The section 1 may if desired be constructed of magnetic material, but the section 2 is constructed preferably of non-magnetic material. The portion 1 of the support is extended at 5 and 6 to provide a long supporting base for the insulator, which base is grooved on its under side, as indicated in Fig. 2, to fit the pipe or rod designed to support the electric conductor by means of the insulator. U-bolts 7 and 8 extend through the projections 5 and 6 for the purpose of clamping the portion 1 of the insulator support to the pipe 9.

The portions 1 and 2 of the insulator support are provided with a cylindrical bore substantially at right-angles with the base for receiving the body of the insulator sections 10 and 11, which sections in turn are provided with a cylindrical bore to receive the cable to be supported. The sections 10 and 11, where they engage each other, are provided with shoulders 12 and 13, which serve the double purpose of retaining the insulator sections in proper position relatively to each other and also of increasing the creepage path from the cable to the insulator support. The construction of the joint between the insulator sections is such that the two portions 10 and 11 are similarly conformed and may be made in the same molds. The insulator sections 10 and 11 are provided at each end, outside of the insulator support, with corrugated end flanges 15 and 16, which increase the creepage surface from the cable around the ends of the insulator to the insulator support. The grooves formed in the end flanges 15 and 16 afford a place in which the dust and dirt accumulates while the insulators are in use, as a result of which the insulating value of the device, is not cut down by the dust and dirt as would be the case were the dust and dirt to accumulate upon flat surface insulators such as have been used in other connections heretofore.

The parts 1 and 2 of the insulator support are preferably made of steel form as indicated in the drawings so that the magnetic effect and eddy currents induced in the parts when the conductors supported by the insulators are used for alternating currents, may be reduced to a minimum and thus the loss from this source may be made comparatively negligible. To further accomplish this, the upper portion 2 may be made of brass or other non-magnetic material. The insulators may be employed equally well for supporting electric conductors of different kinds and it is immaterial whether these conductors be cables, solid or tubular conductors and whether they be insulated or not.

In using the insulators, the portions 10 may be separated from the portions 2 and first mounted in proper position upon the supporting pipes 9, as shown in Fig. 3, after which the insulator sections may be put in place together with the cables 17, in which position they are secured by the clamping bolts 3 and 4.

In the modification shown in Figs. 4 and 5, the construction is similar to that shown in Figs. 1 and 2 with the exception that the 110
base is flat in order that the structure may be mounted upon a flat surface. The supporting base may extend in any direction although as indicated in the drawings, it is generally convenient to have it extend at right angles to the axis of the conductor supported by the insulator. In the modified construction shown in Figs. 4 and 5, the parts are designated by the reference numerals corresponding to the parts shown in Figs. 1 and 2 with the addition of letter "a," for example, the parts of the insulator support are designated as 1 a and 2 a, whereas in the embodiment shown in Figs. 1 and 2 these parts are designated as 1 and 2.

Insulators of the kind described above are intended generally for high potential work and it is, therefore, necessary to have a considerable amount of creepage and leakage surface between the cable supported and the metallic portions of the supporting structure. These conditions are effectively met by my improved structure, since, as pointed out, the surface between the insulator sections is increased by the broken joints formed by the shoulders formed on the engaging ends of the sections, and the amount of surface between the cable and the supports around the ends of the insulators is made a maximum by means of the corrugated end flanges.

It will be noted from the above description that my insulator construction provides an insulator support in which the supporting clamp is rigidly and intimately associated with the insulator clamp, and the simplicity of the structure results in reducing the expense of construction to a minimum. The clamping devices are all independent of each other, as a result of which any one of said devices may be loosened without interfering with any of the others of said devices, either for the purpose of assembling the parts and mounting the cables or for renewing or replacing any of the parts, as desired.

What I claim is:

1. Means for supporting a two-piece tubular insulator comprising a base section adapted to receive said tubular insulator, and a top section adapted to clamp said tubular insulator to said base section, bolts for drawing said top section toward the base section, said top and base sections each comprising a pair of substantially semi-circular end members adapted to engage the tubular insulator, and narrow bars connecting said end members forming a skeleton framework.

2. Means for supporting a two-piece tubular insulator comprising a base section adapted to receive said tubular insulator, and a top section adapted to clamp said tubular insulator to said base section, bolts for drawing said top section toward the base section, said top and base sections each comprising a pair of substantially semi-circular end members adapted to engage the tubular insulator, and narrow bars connecting said end members forming a skeleton framework, the end members and bars comprising said top section being made of nonmagnetic material.

In witness whereof, I hereunto subscribe my name this 20th day of January, A. D. 1912.

EDSON O. SESSIONS.

Witnesses:

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